

## **REMARKS**

By this amendment, the specification has been amended to correct a minor typographical error. In addition, claims 1, 5, 6, 8, and 12 have been amended. New claims 13-20 have been added to provide more complete claim coverage. Claims 1-20 remain in the application. Support for the amendments to the claims can be found the specification and drawings. No new matter has been added. Reconsideration, and allowance of the application, as amended, is respectfully requested.

### **Allowable Subject Matter**

Claims 6-7 and 11-12 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Allowability of claims 6-7 and 11-12 is noted with appreciation.

By this amendment, claim 6 has been amended to include the limitations of original base claim 1. Accordingly, claim 6 is in condition for allowance. Claims 7 and 11 which depend from allowable independent claim 6 are also in condition for allowance. In addition, new claims 13-16 depend from allowable independent claim 6 and are also allowable.

By this amendment, claim 12 has been amended to include the limitations of original base claim 1 and intervening claim 10. Accordingly, claim 12 is in condition for allowance. In addition, new claims 17-20 depend from allowable independent claim 12 and are thus also allowable.

Accordingly, the objection of the claims has been overcome. Claims 6-7 and 11-20 are in *prima facie* condition for allowance.

### **Rejection under 35 U.S.C. §103**

Claim 1 recites a tactile device provided with a number of fluid elements, each fluid element containing a first fluid and a second fluid having different electrical conductivities and being essentially immiscible, a fluid level between the first fluid and the second fluid in each element being movable, and actuator means for moving the fluid level of a number of selected fluid elements by applying an electric force to said fluid elements, wherein each fluid element is at one end provided with a tactile element that is in contact with the fluid for perception of the fluid level by a user, characterized in that the fluid elements comprise one or more capillary tubes in which either the first fluid or the second fluid is electrically conducting and the other fluid, the second or the first fluid, respectively, is electrically insulating, and the fluid level is movable as a result of electro-capillary pressure.

Support for the amendments to claim 1, can be found in the specification at least on page 2, lines 28-33; and page 3, lines 25-30. With respect to the amendment to claim 5, support can be found in the specification at least one page 6, lines 12-14.

Claims 1, 3-5, and 8-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Gilkes et al.** (US patent No. 5,580,251) in view of **Ticknor et al.** (US patent No. 7,016,560 B2). With respect to claim 1, Applicant respectfully traverses this rejection on the grounds that these references are defective in establishing a *prima facie* case of obviousness with respect to claim 1.

As the PTO recognizes in MPEP § 2142:

*... The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of*

*nonobviousness...*

It is submitted that, in the present case, the examiner has not factually supported a *prima facie* case of obviousness for at least the following, mutually exclusive, reasons.

**1. Even When Combined, the References Do Not Teach the Claimed Subject Matter**

The **Gilkes et al.** and **Ticknor et al.** references cannot be applied to reject claim 1 under 35 U.S.C. § 103 which provides that:

*A patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains ... (Emphasis added)*

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, since neither **Gilkes et al.** nor **Ticknor et al.** teaches fluid elements which “... comprise one or more capillary tubes in which *either* the first fluid or the second fluid is *electrically conducting* and *the other fluid*, the second or the first fluid, respectively, is *electrically insulating* ...” as is claimed in claim 1, it is impossible to render the subject matter of claim 1 as a whole obvious, and the explicit terms of the statute cannot be met.

In contrast, **Gilkes et al.** teaches a cavity filled with *organic gel* alone. In addition, **Ticknor et al.** discloses only *conducting* fluids within a microchannel for use in obtaining a differential pressure.

Thus, for this mutually exclusive reason, the examiner’s burden of factually

supporting a *prima facie* case of obviousness has clearly not been met, and the rejection under 35 U.S.C. §103 should be withdrawn.

**2. Prior Art That Teaches Away From the Claimed Invention Cannot be Used to Establish Obviousness**

In the present case the **Ticknor et al.** reference, by providing three electrically *conducting* fluids in series within a microchannel and making *separate electrical contacts* to each of the three conducting fluids, is directed to a system for obtaining a differential pressure by using electrically conducting fluids, in contrast to using electrically *insulating* fluids. Thus, this system clearly teaches away from claim 1, recited above.

Since it is well recognized that teaching away from the claimed invention is a *per se* demonstration of lack of *prima facie* obviousness, it is clear that the examiner has not borne the initial burden of factually supporting any *prima facie* conclusion of obviousness.

Thus, for this reason alone, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection under 35 U.S.C. §103 should be withdrawn.

**3. The Combination of References is Improper**

Assuming, arguendo, that none of the above arguments for non-obviousness apply (which is clearly not the case based on the above), there is still another, mutually

exclusive, and compelling reason why the **Gilkes et al.** and **Ticknor et al.** references cannot be applied to reject claim 1 under 35 U.S.C. § 103.

§ 2142 of the MPEP also provides:

*...the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made.....The examiner must put aside knowledge of the applicant's disclosure, refrain from using hindsight, and consider the subject matter claimed 'as a whole'.*

Here, neither **Gilkes et al.** nor **Ticknor et al.** teaches, or even suggests, the desirability of the combination since neither teaches the specific fluid elements which “... comprise one or more capillary tubes in which *either* the first fluid or the second fluid is *electrically conducting* and *the other fluid*, the second or the first fluid, respectively, is *electrically insulating* ...” as specified above and as claimed in claim 1.

Thus, it is clear that neither patent provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. § 103 rejection.

In this context, the MPEP further provides at § 2143.01:

*The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.*

In the above context, the courts have repeatedly held that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination.

In the present case it is clear that the examiner's combination arises solely from hindsight based on the invention without any showing, suggestion, incentive or

motivation in either reference for the combination as applied to claim 1. Therefore, for this mutually exclusive reason, the examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met, and the rejection under 35 U.S.C. §103 should be withdrawn.

Accordingly, claim 1 is allowable and an early formal notice thereof is requested. Dependent claims 3-5 and 10 depend from and further limits independent claim 1 and therefore is allowable as well. The 35 U.S.C. § 103(a) rejection thereof has now been overcome.

With respect to claims 8 and 9, Applicant respectfully traverses this rejection for at least the following reasons. By this amendment, claim 8 has been amended to depend from now allowable independent claim 6. Accordingly, claim 8 is in *prima facie* condition for allowance. Claim 9 depends from claim 8, which depends from allowable independent claim 6 and thus is also in condition for allowance. Withdrawal of the rejection is respectfully requested.

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Gilkes et al.** in view of **Ticknor et al.** , and further in view of **Cooper et al.** (US patent No. 6,509,892 B1). With respect to claim 2, Applicant respectfully traverses this rejection for at least the following reason. Dependent claim 2 depends from and further limits allowable independent claim 1 and therefore is allowable as well. The 35 U.S.C. §103(a) rejection has now been overcome.

### **Conclusion**

Except as indicated herein, the claims were not amended in order to address issues of patentability and Applicants respectfully reserve all rights they may have under the Doctrine of Equivalents. Applicants furthermore reserve their right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or a continuation application.

It is clear from all of the foregoing that independent claims 1, 6 and 12 are in condition for allowance. Dependent claims (2-5), (8, 9, 11, 13-16), and (17-20) depend from and further limit independent claims 1, 6 and 12, respectively, and therefore are allowable as well.

The amendments herein are fully supported by the original specification and drawings; therefore, no new matter is introduced. An early formal notice of allowance of claims 1-20 is requested.

Respectfully submitted,



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Dated: 5/3/08

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a-32658.197